IN THE CLAIMS:

1   1.   (Currently amended) A device for attaching to a living subject having a joint,

2   comprising a first sensor, a second sensor, a processor, and a non-volatile storage

3   device, said first sensor for attaching to a first body segment above the joint, said

4   second sensor for attaching to a second body segment below the joint, wherein

5   said first sensor and said second sensor each comprise a solid state inclination

6   measuring device for determining inclination with respect to the gravity vector,

7   wherein said ~~inclination~~ inclinations with respect to the gravity vector determined

8   from said first sensor and from said second sensor ~~is~~ are processed in said

9   processor and stored in said non-volatile storage device for distinguishing lying,

10   sitting, and standing positions, wherein said processor and said non-volatile

11   storage device are part of the device for attaching to the living subject.

1   2.   (Canceled)

1   3.   (Previously amended) A device as recited in claim 1, wherein said inclination

2   measuring device comprises a dc accelerometer.

1   4.   (original) A device as recited in claim 1, wherein said inclination measuring

2   device comprises three accelerometers orthogonally mounted.

1   5.   (original) A device as recited in claim 1, wherein said inclination measuring

2   device further comprises a magnetometer.

1   6.   (Previously amended) A device as recited in claim 1, wherein said inclination

2   measuring device comprises a plurality of magnetometers.

1   7.   (Previously amended) A device as recited in claim 6, wherein data from said
2   magnetometers is for providing direction with respect to the earth's magnetic
3   field.

1   8.   (original) A device as recited in claim 1, wherein data from said first sensor is
2   subtracted from data from said second sensor.

1   9.   (original) A device as recited in claim 8, wherein said subtraction is to determine
2   a difference in orientation.

1   10. (original) A device as recited in claim 8, wherein said first sensor and said second
2   sensor are for measuring range of motion of said second body segment with
3   respect to said first body segment.

1   11. (Previously amended) A device as recited in claim 10, wherein data from said
2   range of motion measurement is analyzed for change of range of motion over
3   time.

1   12. (original) A device as recited in claim 11, wherein initial values of said time
2   dependent data are tared out to provide change from said initial values.

1   13. (Previously amended) A device as recited in claim 1, wherein said non-volatile
2   storage device comprises a solid state device.

1   14. (Previously amended) A device as recited in claim 13, wherein said non-volatile
2   storage device comprises a non-volatile memory chip.

1   15. (Previously amended) A device as recited in claim 1, further comprising a
2   feedback mechanism.

1   16.   (Previously amended) A device as recited in claim 15, further comprising a

2   housing, wherein said first sensor, said storage device, said processor, and said

3   feedback mechanism are all within said housing.

1   17.   (original) A device as recited in claim 15, further comprising a housing separate

2   from said first sensor and said second sensor, wherein said feedback mechanism is

3   within said housing.

1   18.   (original) A device as recited in claim 17, wherein said first sensor and said

2   second sensor are wirelessly connected to said housing containing said feedback

3   mechanism.

1   19.   (original) A device as recited in claim 18, wherein said wireless connection is an

2   RF connection.

1   20.   (currently amended) A device as recited in claim 15, wherein said processor is

2   programmed to activate said feedback mechanism is activated if a preset range of

3   motion threshold has been exceeded more than a specified number of times.

1   21.   (currently amended) A device as recited in claim 15, wherein said feedback

2   mechanism includes a vibrator provides vibratory or auditory feedback.

1   22.   (original) A device as recited in claim 15, wherein said feedback mechanism

2   comprises a piezo-electric buzzer or an electromagnetic shaker.

1   23.   (currently amended) A device as recited in claim 15, wherein said feedback

2   mechanism includes a vibratory or audio signal to provide provides feedback to

3   provide one or more of the following: warn of a problem, discourage a movement,

4   support a desired result, or and encourage a movement.

5

1   24.   (currently amended) A device as recited in claim 23, wherein said <u>processor is</u>
2   <u>programmed to provide feedback if the living subject problem comprises</u>
3   repeatedly ~~exceeding~~ <u>exceeds</u> a pre-programmed inclination angle.

1   25.   (original) A device as recited in claim 1, wherein said processor comprises a
2   microprocessor, a signal processor, or a personal computer.

1   26.   (Previously amended) A device as recited in claim 1, wherein data from said
2   inclination determination comprises body segment inclination data as a function
3   of time.

1   27.   (Previously amended) A device as recited in claim 1, wherein data from said
2   inclination determination comprises posture data as a function of time.

1   28.   (currently amended) A device as recited in claim 1, <u>further comprising an output</u>
2   <u>to provide</u> ~~wherein~~ data from said inclination determination ~~is used~~ <u>for use</u> to
3   adjust physical therapy.

1   29.   (original) A device as recited in claim 1, wherein said device further comprises a
2   data entry system.

1   30.   (original) A device as recited in claim 29, wherein said data entry system
2   comprises a button.

1   31.   (currently amended) A device as recited in claim 29, wherein said data entry
2   system <u>includes an input unit</u> ~~is~~ for recording the presence of pain.

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1   32.   (currently amended) A device as recited in claim 29, wherein <u>one or more of the</u>
2   <u>following</u> ~~time, date or other data~~ are recorded when said data entry system is
3   used<u>: time, date, and other data</u>.

1   33.   (Previously amended) A device as recited in claim 1, further comprising a
2   program for displaying data from said inclination determination as a histogram
3   showing number of inclinations at each angle range during a time period.

1   34.   (Previously amended) A device as recited in claim 1, further comprising a
2   program for displaying data from said inclination determination as inclination v.
3   time.

1   35.   (original) A device as recited in claim 1, further comprising a digital filter.

1   36.   (Previously amended) A device as recited in claim 35, wherein said device may be
2   subject to linear accelerations, wherein said digital filter is for reducing effect of
3   <u>said</u> linear accelerations on the data.

1   37.   (original) A device as recited in claim 35, wherein said digital filter comprises a
2   low pass filter or a high pass filter.

1   38.   (Previously amended) A device as recited in claim 1, wherein said inclination
2   measuring device comprises dc accelerometers, wherein said device further
3   comprises a high pass filter, wherein output of said accelerometers that passes
4   through said high pass filter is subsequently integrated and used to compute a
5   resultant velocity which is used to calculate energy used.

1   39.   (currently amended) A device as recited in claim 1, wherein said processor uses
2   inclination data from said first and second sensors device is further for
3   determining body posture in said sitting position.

1   40.   Cancel

1   41.   Cancel

1   42.   (Previously canceled)

1   43-91. Cancel

1   92.   (Previously presented) A device as recited in claim 1, wherein said joint is a hip
2   joint.

1   93.   (Previously presented) A device as recited in claim 1, further comprising a sensor
2   for further detecting posture based on curvature of the spine.

1   94.   (Previously presented) A device as recited in claim 93, wherein said sensor is
2   capable of detecting a kyphotic curvature of the spine.

1   95.   (Previously presented) A device as recited in claim 94, wherein said processor is
2   programmed to measure the time the subject has said kyphotic curvature of the
3   spine and determines whether said time exceeds a preset value, and wherein said
4   processor is further programmed to prompt the subject to move if said time
5   exceeds said preset value.

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1   105. (currently amended) A device as recited in claim 1, wherein said <u>processor uses</u>
2   <u>inclination data from said first and second sensors</u> solid state inclination
3   measuring devices are further for distinguishing bending in one said position.

1   106. (currently amended) A device as recited in claim 1, wherein said <u>processor uses</u>
2   <u>inclination data from said first and second sensors</u> solid state inclination
3   measuring devices are for distinguishing forward bending, backward bending, or
4   <u>and</u> lateral bending.